

AMENDMENTS TO THE CLAIMS:

This listing of claims replaces all prior versions and listings of claims in the application.

LISTING OF CLAIMS:

1. (Cancelled)
2. (Currently Amended) The ~~apparatus~~ filter of claim 8 1, further comprising a carrier substrate, the ~~resonator~~ resonators and the capacitor being on the carrier substrate.
3. (Currently Amended) The ~~apparatus~~ filter of claim 8 1, wherein each of the upper layer region and the lower layer region comprises a plurality of layers.
4. (Currently Amended) The ~~apparatus~~ filter of claim 3, wherein a plurality of layers in the upper layer region comprises layers that include different materials, and a plurality of layers in the lower layer region comprises layers that include different materials.
5. (Currently Amended) The ~~apparatus~~ filter of claim 8 1, wherein at least one of the upper layer region and the lower layer region comprises an acoustic mirror, the acoustic mirror comprising at least two alternating layers having different acoustic impedances.

6. (Currently Amended) The ~~apparatus~~ filter of claim 5, wherein at least one layer of the acoustic mirror comprises an electrode layer.

7. (Currently Amended) The ~~apparatus~~ filter of claim 2, wherein the carrier substrate includes an air gap; and

wherein ~~the resonator~~ at least one of the resonators is over the air gap.

8. (Currently Amended) A filter comprising resonators for use with bulk acoustic waves, each of the resonators comprising:

a lower layer region comprising a first electrode;

an upper layer region comprising a second electrode; and

a piezoelectric layer between the first electrode and the second electrode;

wherein the resonators are in at least one of a ~~ladder-type arrangement~~, a lattice-type arrangement[[,]] and a stacked crystal filter arrangement; and

a capacitor in parallel with at least one ~~or~~ of the resonators or in series with at least one of the resonators.

9. (Previously Presented) The filter of claim 8, wherein the capacitor is connected to only one of the resonators, the capacitor being connected in a circuit path that is in series with, or in parallel with, the one of the resonators.

10. (Previously Presented) A duplexer comprising a filter according to claim 8.

11. (Currently Amended) An electrical circuit comprising:

a substrate;

a stack of resonators; and

an acoustic mirror between the substrate and the stack of resonators;

wherein the stack of resonators comprises comprising:

first resonators that operate with bulk acoustic waves, the first resonators comprising an upper resonator and a lower resonator, ~~each of the upper resonator and the lower resonator comprising upper and lower electrodes; and~~

~~a second resonator the operates with bulk acoustic waves, the second resonator comprising electrodes; and~~

a coupling layer between an upper electrode of the lower resonator and a lower electrode of the upper resonator;

~~wherein the first resonators and the second resonator each comprise: a lower electrode, an upper electrode, and a piezoelectric layer arranged between the upper and lower electrodes; and~~

wherein ~~an~~ the upper electrode of the lower resonator and a the lower electrode of the upper resonator are electrically connected to an electrode of the second resonator.

12. (Previously Presented) The electrical circuit of claim 11, wherein an electrode of the second resonator is connected to ground.

13. (Cancelled)

14. (Previously Presented) The electrical circuit of claim 11, wherein the second resonator comprises an LC resonator.

15. (Previously Presented) The electrical circuit of claim 11, further comprising a second stack of resonators, the second stack of resonators containing the second resonator.

16. (Previously Presented) The filter of claim 8, further comprising a carrier substrate, at least one of the resonators and the capacitor being on the carrier substrate.

17. (Currently Amended) The filter of claim 8, wherein, for ~~each~~ at least one of the resonators, an upper layer region and a lower layer region comprises a plurality of layers.

18. (Previously Presented) The filter of claim 17, wherein a plurality of layers in each upper layer region comprises layers that include different materials, and a plurality of layers in each lower layer region comprises layers that include different materials.

19. (Previously Presented) The filter of claim 8, wherein each upper layer region and each lower layer region comprises an acoustic mirror, each acoustic mirror comprising at least two alternating layers having different acoustic impedances.

20. (Previously Presented) The filter of claim 19, wherein at least one layer of each acoustic mirror comprises an electrode layer.

21. (Currently Amended) The filter of claim 16, wherein the carrier substrate includes an air gap; and

wherein at least one ~~or~~ of the resonators is over the air gap.

22. (Previously Presented) A duplexer comprising a filter according to claim 9.

23. (New) The electrical circuit of claim 11, wherein the second resonator comprises a single resonator, the single resonator comprising a lower electrode, an upper electrode, and a piezoelectric layer between the upper electrode and the lower electrode.